

LAW OFFICES

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September 30, 1997

VIA HAND DELIVERY

Mr. William F. Caton  
Federal Communications Commission  
Office of the Secretary  
1919 M Street, N.W.  
Washington, D.C. 20554

**Re: *Ex Parte* Submission**  
**Notice of Proposed Rulemaking**  
**ET Docket No. 95-183/ RM-8553; PP Docket No. 93-253**

Dear Mr. Caton:

On behalf of P-Com, Inc., copies of the attached letter and presentation materials were hand delivered today to each of the following members of the Commission's staff:

Jackie Chorney, Legal Advisor to Chairman Hundt  
Suzanne Toller, Legal Advisor to Commissioner Chong  
David Siddall, Legal Advisor to Commissioner Ness  
Rudolfo Baca, Legal Advisor to Commissioner Quello  
Daniel Phythyon, Chief, Wireless Telecommunications Bureau  
Rosalind Allen, Deputy Bureau Chief, Wireless Telecommunications Bureau  
David Horowitz, Chief, Private Wireless Division, Wireless Telecommunications Bureau  
Herbert Zeiler, Deputy Chief, Private Wireless Division, Wireless Telecommunications Bureau  
Robert James, Microwave Services Asst., Private Wireless Division, Wireless Telecommunications Bureau  
Susan Magnotti, Staff Attorney, Private Wireless Division, Wireless Telecommunications Bureau  
D'wana Terry, Chief Counsel, Wireless Telecommunications Bureau  
David Wye, Technical Advisor, Wireless Telecommunications Bureau  
Elliott Maxwell, Deputy Chief, Office of Plans and Policy

The instant submission is subject to the Commission's "permit-but-disclose" procedures under Rule Section 1.1106(a)(2) (*see*, 47 C.F.R. §1.1106(a)(2)). Accordingly, pursuant to Section 1.1206(b)(1) of the Commission's Rules, the original and four copies (two for each Docket number) of the above-

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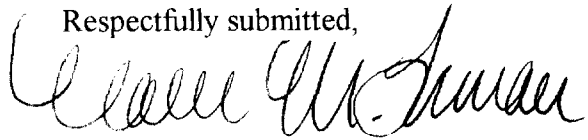
**PIERSON & BURNETT, L.L.P.**

Mr. William Caton  
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referenced items are being submitted for inclusion in the public record for the above-captioned proceeding. Please place a copy of this filing in the Commission's public file for the above-captioned dockets.

Any questions or inquiries regarding this filing may be directed to the undersigned.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Valerie M. Furman".

Valerie M. Furman, Esq.  
Counsel for P-Com, Inc.

Attachments

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ET Docket No. 95-183, RM-8553; PP Docket No. 93-253**

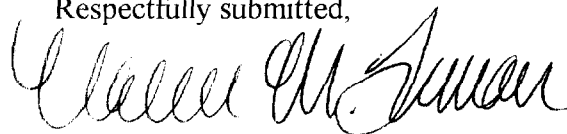
On behalf of P-Com, Inc. ("P-Com"), we hereby submit the attached materials in support of Commission approval of point-to-multipoint operations in the 38 GHz frequency band for your review.

P-Com is a pioneer and world leader in the development and manufacturing of point-to-point equipment. Like others in the 38 GHz industry, P-Com feels strongly that point-to-multipoint is critical to the growth of 38 GHz operations, and wishes to move forward quickly with its development and production of point-to-multipoint equipment.

It is P-Com's interpretation that the Commission's current Part 101 Rules regarding the use of directional antennas appear to bar or inhibit point-to-multipoint operations at 38 GHz (*see*, Section 101.115 (c)), and P-Com has concluded that prior Commission approval would seem necessary in order to vary from the Category A antenna requirements prescribed therein. Accordingly, P-Com respectfully requests that the Commission take action in the above-captioned rulemaking proceeding to definitively permit point-to-multipoint operations at 38 GHz.

Any questions or inquiries regarding this filing may be directed to the undersigned.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Valerie M. Furman". The signature is fluid and cursive, with the first name being the most prominent.

Valerie M. Furman, Esq.  
Counsel for P-Com, Inc.

Attachment

# PIGOM

***"Our Mission is to be a leading Supplier of Telecom Distribution  
Equipment and Services for End User Access to the World-Wide  
Network."***

# **Presentation to the FCG on Point to Multi-Point Radio System Requirements**

# Presentation Summary

- **P-Com Inc**
- **Point to Multi-Point System Features**
- **Spectrum Efficiencies**
- **FCC Rules**
- **P-Com Proposal for Point to Multi-Point**

# P-Com Inc.

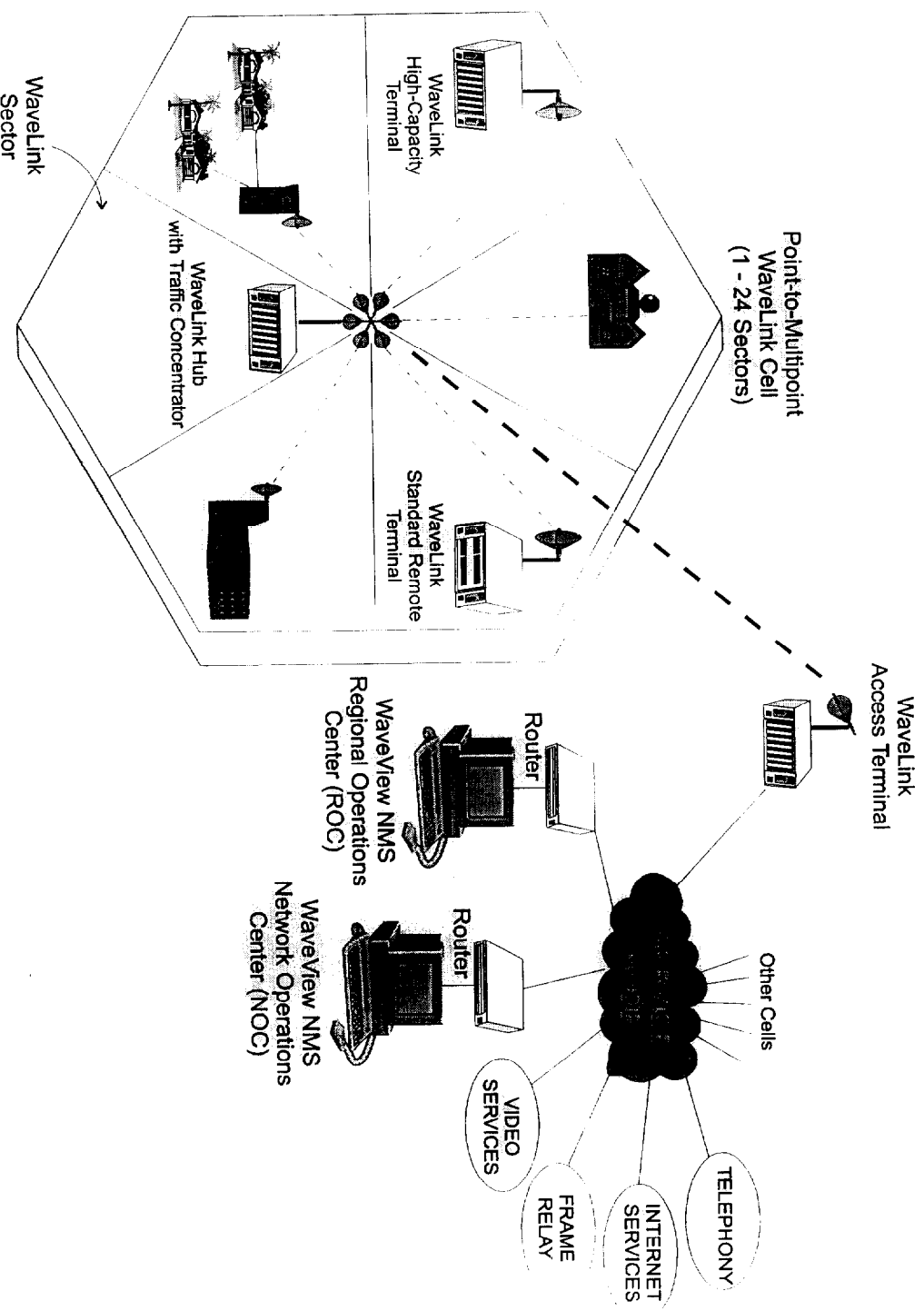
- **P-Com Designs and Manufactures millimeter wave radios for Point to Point applications.**
- **Radios in frequency bands 2 to 50 GHz.**
- **Domestic and world wide sales.**
- **Shipments of 25,000 radio terminals since 1993.**
- **Developing Point to Multi-Point Systems for millimeter wave bands.**

# Point to Multi-Point System Features

- **Using state of the art technology to provide multiple users per central hub station with Bandwidth-on-demand service.**
- **Capacities adjustable on demand from 64 kb/s to 155 Mb/s per remote site.**
- **Supports asymmetric traffic rates.**
- **Central sector subsystems with 1 to 24 sectors per hub; 15 to 360 degrees.**
- **Capacity for up to 250 remote sites per sector.**
- **Coverage from hub of 1 to 10 km.**



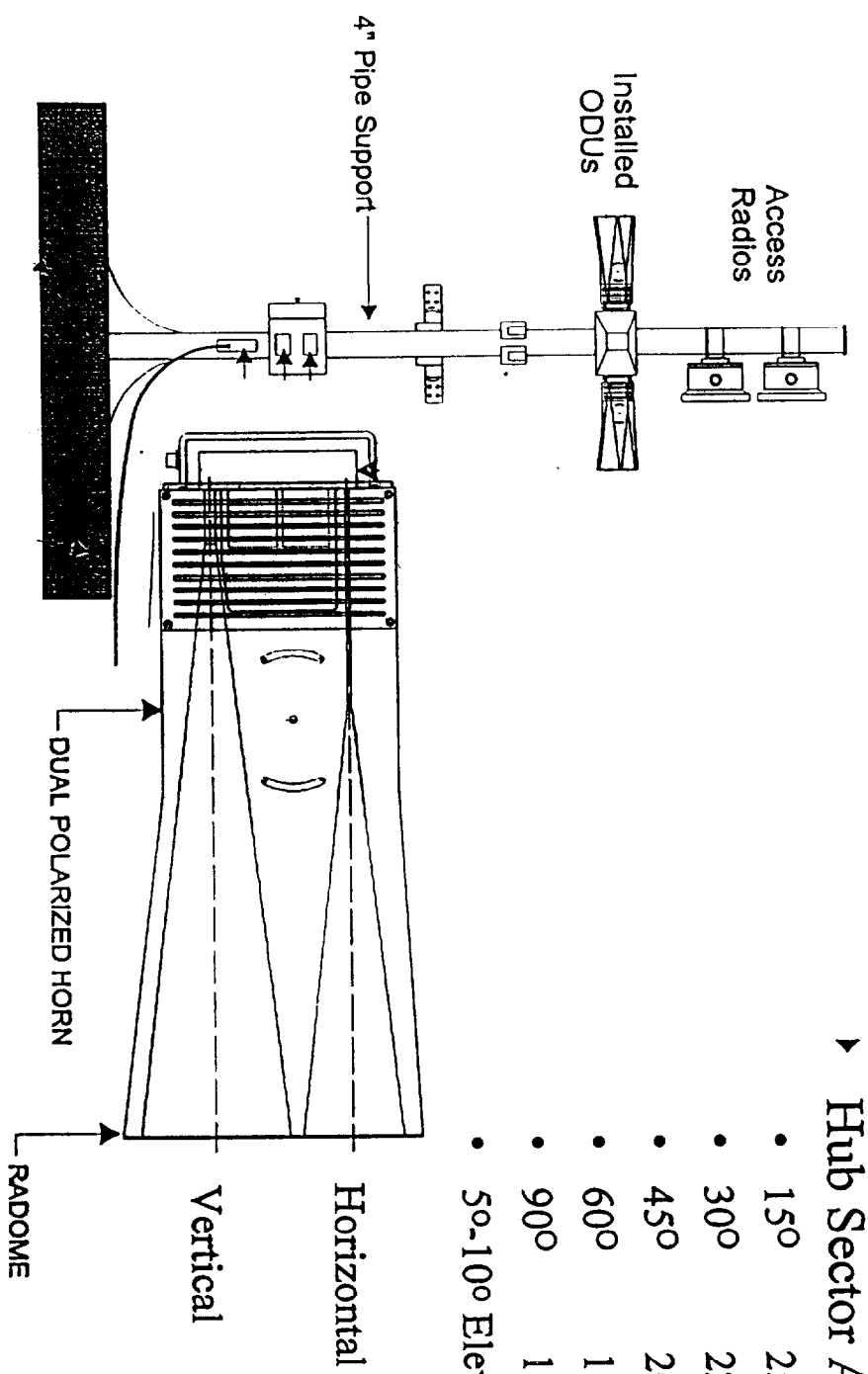
# P-COM Wireless MAN Solution



“Network Solutions for Global Wireless Communications”



## Hub



### ► Hub Sector Antenna Gain

- 15°      25 dBi
- 30°      22 dBi
- 45°      20 dBi
- 60°      19 dBi
- 90°      17 dBi
- 50-100° Elevation Coverage

"Network Solutions for Global Wireless Communications"



# Spectrum Efficiencies

## Point to Point

## Point to Multi-Point

- One radio link/user
  - Many antennas at Hub
  - Links are fixed capacity
  - Up-down link same capacity
  - Existing technology
    - 10 T1 customers/50 MHz
    - 1 DS3 customer/50 MHz
- 6,000 users/Hub  
[24sectors\*250 remotes]
  - Max 24 antennas
  - Dynamic BW sharing
  - Dynamic demand based
    - Point to Multi-Point
      - 105 T1 customers/50 MHz
      - Higher for sub-rates

# FGC Rules

- **Section 101.115 requires “Directional Antennas” be used with each microwave station with two exceptions:**

- Unless otherwise authorized upon specific request by the applicant.
- Where a station communicates with more than one point, a multi- or omni-directional antenna may be authorized if necessary.

- **Section 115, subsection c defines antenna specifications for frequencies above 31 GHz**
  - Standard A and Standard B.

# **P-Gom Proposal for Point to Multi-Point**

- **Since Section 115 does not facilitate Point to Multi-Point operation.**
- **P-Gom proposes a relaxation on the rules regarding antenna requirements.**
- **Specifically above 31 GHz, propagation enables good frequency reuse.**
- **Frequencies above 31 GHz the natural choice for high capacity local loop systems.**

# **P-Com Proposal Continued**

- **Co-existence with Point to Point is possible and facilitated by Private frequency coordination the responsibility of the licensee.**
- **Required antenna gain relaxations for frequencies above 31 GHz will be in the range 13-21 dB.**
- **Business development of Point to Multi-Point will maintain US lead in exploiting millimeter wave frequency bands.**